State of Nevada
Division of Environmental Protection

Bureau of Air Pollution Control

How to Complete the Actual Production/Emissions Reporting Form

This fact sheet provides a step-by-step guide to assist you with the completion of your Actual Production/Emissions Reporting Form (Report). Please read through these instructions carefully before completing your Report, including Figure 1 on page four that depicts an example Report form complete with hypothetical calculations similar to those you are required to complete.

This fact sheet is provided by the Nevada Division of Environmental Protection - Bureau of Air Pollution Control (NDEP-BAPC). If you have questions or require one-on-one assistance with your Report, feel free to contact BAPC staff member Patrick A. Anderson at 775-687-9351.

Step #1: Review Your Current Operating Permit and the Report Form:

You should receive your Report forms from the NDEP by the end of January each year. This Report is used to calculate your annual emissions fee and is based on the air permit issued to your facility.

The Pollutant ID listed on the Report form should match the air pollutants emitted from the facility as listed in your air permit. Each emission source will have a separate Permit Sequence #. This is a good opportunity to verify that all significant sources of air emissions are included in your current operating permit. It is to your advantage to contact the NDEP with any new sources rather than respond to a discovery during an inspection.

Step #2: Assemble Operating Information for the Reporting (Previous) Year:

Reviewing your Reports from prior years may be helpful in filling out the Report for the current year. The air emissions are calculated from the actual operating throughput for each emission unit for the reporting year. The throughput is likely to be specified as tons processed, or British Thermal Units (BTU) of fuel consumed. In some instances, an alternative unit of measurement may be specified. Make sure that the units of measurement match the emission factor units. Separate records should be maintained for each individual emission source unless the same total throughput passes through all units.

The following information should be assembled to assist in completing your Report:

Fuel burning equipment:

- Total gallons (gal) of fuel oil, propane, etc., or cubic feet (cu. ft) of natural gas used during the year for each combustion unit.
- Heat content in Btu for each fuel source (Btu/gal or Btu/cu ft can be obtained from fuel supplier)
- Total hours of operation for each combustion unit.

Processing equipment:

- Total tons processed for the year for each process unit.
- Total hours of operation for each process unit.

Step #3: Calculate the Annual Emissions:

The Report form should include the appropriate emission factor for each emission source *(see note below). The annual tons of emissions can be calculated using simple multiplication. The example calculations provided on page four include common conversion factors useful in calculating the information requested. Feel free to contact Patrick Anderson for help with these calculations.

Class I, II, III and Change of Location (COLA) Permits: Perform calculations for each pollutant listed on the form, usually one or more of the following: PM, PM_{10}, SO_2, CO, NOx, VOC's, Pb, H_2S, & HAP's.

A. Fuel Burning Equipment: Emission factors for each of the above pollutants are usually specified as lb/MMBtu (MM = million). For example, the emission factor for CO from an industrial diesel engine is 0.95 lb/MMBtu of fuel input. Perform calculations for each individual pollutant listed.

Fuel Oil:

1. **Convert gallons of fuel to MMBtu/yr:** For example, where distillate fuel oil has a typical heating value of 140,000 Btu/gal.

   140,000 Btu/gal x gallons of fuel used ÷ 1,000,000 = MMBtu/yr
2. Multiply the MMBtu/yr x emission factor (lb/MMBtu) = lb/yr
3. Calculate annual emissions: lb/yr ÷ 2000 lb/ton = ton/yr

Natural Gas:

1. **Convert *Btu/cu ft to MMBtu/yr:*** Natural gas typically has a heating value of 1,050 Btu/cu ft x MMcu ft gas used = MMBtu/yr, **or**

   Convert Therms to MMBtu : Therms ÷ 10 = MMBtu (Therm = volume of gas equal to 100,000 Btu)
2. Multiply the emission factor (lb/MMBtu) x MMBtu/yr = lb/yr
3. Calculate annual emissions: lb/yr ÷ 2,000 lb/ton = ton/yr

B. Process Equipment: Emission factors are usually specified in lb/ton. The annual emissions are based on the total tons processed for the year.

1. Calculate lb/year: tons processed x emission factor (lb/ton) = lb/yr
2. Calculate tons of annual emissions: lb/yr ÷ 2,000 lb/ton = tons/yr

********** **Note** **********

The emission factor used in your air permit is provided for you in column (D) of the report form. If you choose to substitute an alternate emission factor based on recent testing, trade association data, etc., you must provide documentation with the report supporting the use of the alternate factor.

Surface Area Disturbances (SAD): PM_{10} will be listed in the Pollutant ID Column denoting particulate matter as the emitted pollutant. Since SAD emissions are "fugitive emissions", not directly attributable to a piece of equipment or production process, the emission factor column will be blank. Production rates and emissions are not reported by the source. However, the status of the operation must be reported in the "Notes" column using one of the following terms:

- ***Active:*** Work is still in progress; the site work is active.
- ***In Stabilization:*** The surface disturbance activity is complete, and stabilization work is in progress.
- ***Stabilized:*** All work is complete, and final stabilization is complete. The project has ended.

Step #4: Responsible Official Certification:

The "Responsible Official" (RO) designated in your original application package must sign the report certifying that the information contained in the Report is correct. If the facility's RO has changed, NDEP must be notified in writing of this change by either the original RO or an officer of the company as defined in the NAC 445B.156. If the new RO designee does not meet the qualifications set forth in NAC 445B.156.1(a-d), NDEP must concur in writing with this designation. If you find that your facility's RO has changed, or needs to be changed, please ensure that the new designee meets the following qualifications and include on official letter requesting the change.

NAC 445B.156 "Responsible official defined. "Responsible official" means:

1. For a corporation:
    - A president;
    - A vice president in charge of a principal business function;
    - A secretary;
    - A treasurer; or
    - An authorized representative of such a person who is responsible for the overall operation of the facility and who is designated in writing by an officer of the corporation and approved in advance by the director.

2. For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

3. For a municipality or a state, federal or other public agency, a ranking elected official or a principal executive officer, including, for a federal agency, a chief executive officer who has responsibility for the overall operations of a principal geographic unit of the agency.

4. For an affected source, the designated representative or his alternate, as defined in 42 U.S.C. § 7651a(26).

Step #5: Send it in:

Double-check all your production data and calculations. Verify the RO signature to ensure that it is correct. If necessary, enclose any required correspondence certifying the RO's designation. If you believe that you no longer require an air quality operating permit due to facility closure or termination of permitted activities, enclose a permit cancellation request along with your submittal. The request must be signed by the designated RO. NDEP will evaluate your request and respond in writing, confirming or denying your request. It is best to submit a cancellation request along with your Report. This will ensure your request is processed prior to the actual generation of an annual fiscal year invoice, helping to minimize any misunderstandings that could result in costly and time-consuming compliance actions should you not pay your invoice in a timely manner. Make a copy of all correspondence as well as supporting data and calculations for your files and future reference.

Avoid problems by not waiting until the deadline. Send it in early!

Step #6: Have Questions, Not Sure?

Contact Patrick A. Anderson at 775-687-9351 for any questions regarding your Actual Production/Emissions Reporting Form.

Figure 1 **Example "Calendar Year 2004 Actual Production/Emissions Reporting Form"**

A. Pollutant ID: Lists each air pollutant emitted from the system.

B. Combustion Equipment: Insert actual fuel consumed in gallons, million Btu's, standard cubic feet, etc.

C. Should be the same as the emission factor units in column E.

D. & E. Emission factor units provided should match that used in your permit. If an alternate factor is substituted, provide documentation.

F. Calculate annual emissions by multiplying fuel consumed (column B) x emission factor (column D). Divide by 2,000 to get tons/yr.

G. Actual hours operated during reporting year.

Combustion Unit:

Permit Seq # : 001 System Desc: Diesel Generator #1

A	B	C	D	E	F	G	
Pollutant ID	**Production/ Heat Rate**	**Production Units** (e.g. MMBtu/yr)	**Emission Factor**	**Emission Factor Units**	**Annual Emissions** (tons/yr)	**Hours Operated**	**Notes**
NOx	100,000	MMbtu/yr	4.41	lb/MMBtu	220.5		
CO	100,000	MMbtu/yr	0.95	lb/MMBtu	47.5		
SOx	100,000	MMbtu/yr	0.29	lb/MMBtu	14.5		
PM10	100,000	MMbtu/yr	0.092	lb/MMBtu	4.6		

Production Unit:

Permit Seq # : 002 System Desc: Crushed Stone Screen

A	B	C	D	E	F	G	
Pollutant ID	**Production/ Heat Rate**	**Production Units** (e.g. tons/yr)	**Emission Factor**	**Emission Factor Units**	**Annual Emissions** (tons/yr)	**Hours Operated**	**Notes**
PM10	200,000	tons/yr	0.092	lb/ton	9.2		

A. Pollutant ID: Lists each air pollutant emitted from the system.

B. Process Equipment: Insert actual production in tons, lbs, gals, etc.

C. Should be the same as the emission factor units in column E.

D. & E. Emission factor units provided should match that used in your permit. If an alternate factor is substituted, provide documentation.

F. Calculate annual emissions by multiplying actual production (column B) X emission factor (column D). Divide by 2,000 to get tons/yr.

G. Actual hours operated during reporting year.

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